Fair semigroups

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Fair semigroups are non-additive analogues of xst-rings, introduced by Xu, Shum and Turner-Smith [2].

If $S$ is a semigroup then a right $S$-act $A_S$ is called unitary if $A_S = A$. We say that a semigroup $S$ is a right fair semigroup (see [1]) if every subact of a unitary right $S$-act is unitary. One defines left fair semigroups dually. By a fair semigroup we mean a semigroup which is both left and right fair.

It turns out that a semigroup $S$ is right fair if and only if for every sequence $(s_i)_{i \in \mathbb{N}} \in S^\mathbb{N}$ of elements of $S$ there exist $n \in \mathbb{N}$ and $u \in S$ such that

$$s_n \ldots s_2 s_1 u = s_n \ldots s_2 s_1.$$

We will give a list of examples of fair semigroups and some basic facts about them.

This talk is based on joint research with László Márki.

References
